

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number
WO 2005/015355 A2

- (51) International Patent Classification⁷: **G06F**
- (21) International Application Number:
PCT/US2004/025490
- (22) International Filing Date: 6 August 2004 (06.08.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/493,232 7 August 2003 (07.08.2003) US
- (71) Applicant (for all designated States except US): MAT-SUSHITA ELECTRIC INDUSTRIAL CO., LTD.
[JP/JP]; 1006, Oaza Kadoma, Kadoma-Shi, Osaka 571-8501 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MA, Yue [US/US]; 6 Tiffany Court, Princeton Junction, New Jersey 08550 (US).
GUO, Jinhong [US/US]; 6 Tiffany Court, Princeton Junction, New Jersey 08550 (US).
- (74) Agent: STOBBS, Gregory; Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

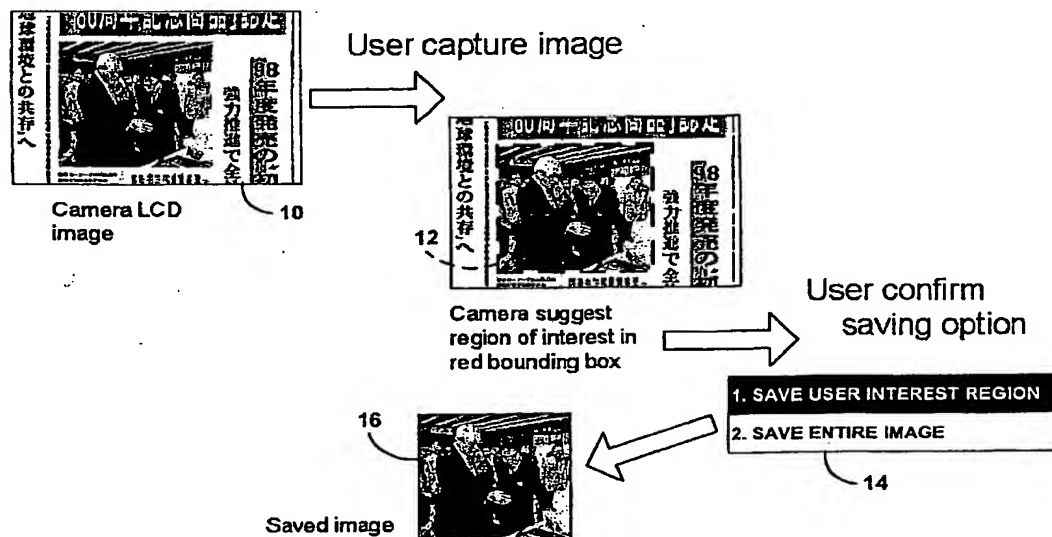
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: AUTOMATIC IMAGE CROPPING SYSTEM AND METHOD FOR USE WITH PORTABLE DEVICES EQUIPPED WITH DIGITAL CAMERAS



(57) Abstract: An automatic image cropping system is for use with a portable device having an image capture mechanism and a limited resource for storing or transmitting captured information. The system includes a region of interest suggestion engine defining plural image region candidates by performing image segmentation on an image stored in digital form. The engine also determines if an image region candidate is likely to be more or less interesting to a user than another image region candidate. The engine further selects an image region candidate determined as likely to be of most interest to the user. In some embodiments, the engine further possesses a training module to track user interaction with the portable device and adjust future determination of likelihood of user interest accordingly.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.